Small
Business
Innovation
Research

A Light Weight, Low-Cost, Dual Array Horizon Sensor

Servo Corporation of America

Westbury, NY

INNOVATION

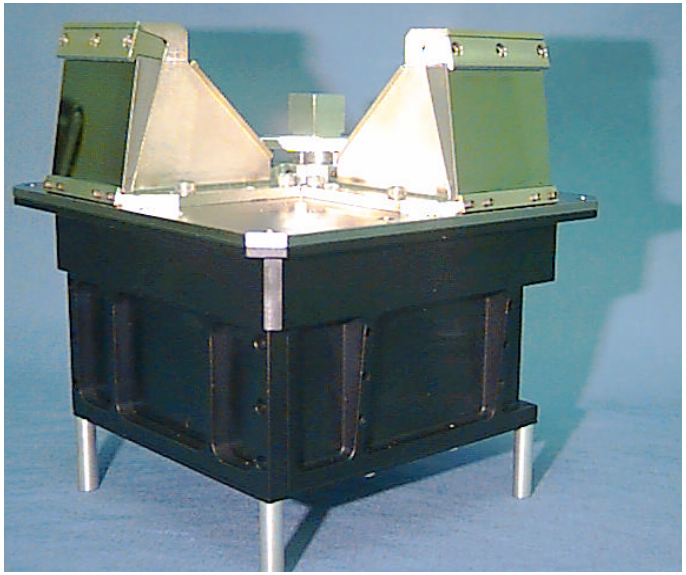
The Mini Dual Earth Sensor (MiDES) is an Earth horizon sensor that provides higher accuracy through the use of pyroelectric arrays and a patented radiance compensation scheme.

ACCOMPLISHMENTS

- Developed and patented a high accuracy radiance compensation and sun/moon rejection scheme.
- Combines the versatility of a conical scanner with the accuracy and reliability of a staring sensor.

COMMERCIALIZATION

- Sold first sensor to Surrey Satellite Technology Ltd. of the UK for use on the UoSAT 12 spacecraft.
- Sensor under active consideration for the LEO One, Teledesic, ECCO, and E-Sat constellations totaling nearly 1000 sensors and over $50 million in revenue.
- Technology used to develop Dual Array Single Head (DASH) Earth Sensor Assembly. Contracted to Final Analysis, Inc. to provide 84 units for a 36-satellite constellation.



Mini-Dual Earth Sensor (MiDES)

GOVERNMENT SCIENCE/APPLICATIONS

- Designed and built an engineering flight model which was successfully flown as an experiment aboard the ASTRO SPAS satellite launched from STS 85 in August 1997.
- Proposed for use on the USAF TSX-6 spacecraft.
- Flight data from ASTRO SPAS will be used by NASA to evaluate autonavigation system composed of GPS and Star Sensors.
- Delivered the MiDES Earth Sensor to Orbital Sciences Corporation for use on the NASA QuikToms Program.

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Goddard Space Flight Center

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